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1	IN THE UNITED STATES DISTRICT COURT FOR
2	THE MIDDLE DISTRICT OF NORTH CAROLINA
3	
4	MAXWELL KADEL, et al.)
5)
6	Plaintiffs)
7) Cause No.
8	vs.) 1:19-cv-00272-
9) LCB-LPA
10	DALE FOLWELL, et al.)
11)
12	Defendants)
13	
14	VIDEO ZOOM DEPOSITION OF DR. PAUL W. HRUZ
15	Taken on behalf of the Plaintiffs
16	September 29, 2021
17	
18	Sheryl A. Pautler, RPR,
19	MO-CCR 871, IL-CSR 084-004585
20	
21	(The proceedings began at 9:31 a.m. Eastern.)
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1	THE VIDEOGRAPHER: Off the record at 6:00.
2	(Whereupon there was a short
3	break.)
4	THE VIDEOGRAPHER: We are back on the
5	record at 6:15. Excuse me.
6	[EXAMINATION]
7	QUESTIONS BY MR. KNEPPER:
8	Q. Dr. Hruz, in your testimony, you mentioned
9	additional studies that reflect your understanding
10	of the effect of hormone therapy in the patient
11	outcomes. Are you referring to studies in addition
12	to the study published by the American Journal of
13	Psychiatry for Branstrom and Pachankis?
14	A. Yes, yes. I'm aware of actually very
15	recently there's been another study. I may have
16	mentioned it earlier but have not had the
17	opportunity to go over those findings in detail. A
18	study by Hisle-Gorman in the Journal of Sexual
19	Medicine published very recently, which actually is
20	in complete agreement with the retracted Branstrom
21	paper showing that mental health utilization remains
22	elevated.
23	In fact, in that paper, this is a
24	population of children in the military and they
25	actually had a control group which were siblings to

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1	the effected children with sex discordant gender
2	identity. And when they looked at after receiving
3	cross-sex hormones their mental health utilization
4	remained elevated. In fact, the use of psychotropic
5	medications increased in that study.
6	I think that's really in line noting
7	that the Branstrom paper the controversy surrounded
8	the conclusions related to surgical interventions.
9	But even before the retractions, it was acknowledged
10	the cross-sex hormones themselves did not have any
11	benefit. That was one of the original author's
12	conclusions.
13	Q. So I'm going to ask for you to look at
14	Exhibit 22.
15	A. Yes, I have that up.
16	(Whereupon Exhibit 22 was
17	<pre>introduced for identification.)</pre>
18	Q. (By Mr. Knepper) Is that the Hisle-Gorman
19	article you were referring to?
20	A. That is correct.
21	Q. And this article was published after the
22	submission of your report to this court?
23	A. That is correct.
24	Q. But
25	A. Yeah.

Q. But you -- you -- when you're referring to the science and recent studies, you're referring to the reports discussed -- the articles discussed in your report and also to this more recent article; is that correct?

A. That is correct.

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- Q. Okay. Dr. Hruz, at one point you mentioned the Dutch model and you mentioned -- let me start over. In this context, when it was referred to as the Dutch model, what are they discussing, what are -- what are providers and scientists discussing?
- A. Yeah. So the original paper that came out and was published that is often referred to as the Dutch model was a group of predominantly males that presented with prepubertal onset of gender dysphoria and were followed over time. And many have drawn attention to the fact that at the time that study was done, the demographics of the people presenting for care were quite remarkably different than the current population. And indeed what was predominantly a condition that affected males over females is now reversed. And so females with male gender identity is now the largest group.

The other difference in the patients

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Q. Dr. Hruz, you mentioned very briefly in response to plaintiff's counsel, the effect of sex hormones on brain development during puberty. Can you provide additional information about the state of scientific knowledge on -- on that?

A. Yes. So there are many -MR. GONZALEZ-PAGAN: Form.

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A. So I understand the question, you're asking me about whether there are any effects of GnRH agonists on the developing brain. And the answer to that is it's -- there -- it's an unsettled question. There's many -- like the effects on bone density are already known. There are many unknowns about the affect of suppressing normal timed puberty on brain development.

However, there is knowledge that it's based upon the effects of sex steroids themselves independent of suppressing it that have been studied for many years. The state of the science is often conflicting and unclear. The best data actually comes from several animal models, sheep in particular. But it involves the maturation of the brain in areas, for example, of decision-making, executive function.

And, you know, all of these features

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are part of the whole adolescent process where an individual is able to overcome the adolescent impulsivity, the inability to see long-term consequences of their action, all of the reasons why in other areas adolescents are not allowed to make decisions, for example, to purchase and drink alcohol, to purchase and smoke cigarettes and to vote, are all based upon that developmental process that occurs.

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Now, the science behind that is in its rudimentary stages right now. It includes structural studies. It includes functional studies. You know, functional magnetic resonance imaging. And really is put forward as a very important area of research.

So, again, this is why this is relevant, is that when we're talking about -- and this came up earlier in this deposition, about the differences between suppressing precocious puberty from suppressing puberty during the adolescent years. And that is the basis for the concern. There is emerging science and much more science that needs to be done.

So certainly the safest conclusion would be that there are many unknowns and many